

TRANSMITTAL FORM

Application Serial Number	10/643,752
Filing Date	August 19, 2003
First Named Inventor	Liu
Group Art Unit	1637
Examiner Name	Jezia Riley
Attorney Docket No.	LS5-001
Patent No.	Not applicable
Issue Date	Not applicable

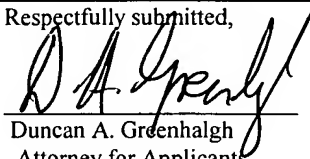
ENCLOSURES (check all that apply)

<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Check Attached <input type="checkbox"/> Copy of Fee Transmittal Form	<input type="checkbox"/> Copy of Notice to File Missing Parts of Application <input type="checkbox"/> Formal Drawing(s)	<input type="checkbox"/> Notice of Appeal to Board of Patent Appeals and Interferences <input type="checkbox"/> Appeal Brief (in triplicate)
<input type="checkbox"/> Amendment/Response <input type="checkbox"/> Preliminary <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Letter to Official Draftsperson including Drawings [Total Sheets _____]	<input type="checkbox"/> Request For Continued Examination (RCE) Transmittal <input type="checkbox"/> Power of Attorney (Revocation of Prior Powers) <input type="checkbox"/> Terminal Disclaimer	<input type="checkbox"/> Status Inquiry <input checked="" type="checkbox"/> Return Receipt Postcard <input checked="" type="checkbox"/> Certificate of First Class Mailing under 37 C.F.R. 1.8 <input type="checkbox"/> Certificate of Facsimile Transmission under 37 C.F.R. 1.8
<input type="checkbox"/> Petition for Extension of Time	<input type="checkbox"/> Executed Declaration and Power of Attorney for Utility or Design Patent Application <input type="checkbox"/> Small Entity Statement	<input type="checkbox"/> Additional Enclosure(s) (please identify below)
<input checked="" type="checkbox"/> Information Disclosure Statement (3 pgs.) <input checked="" type="checkbox"/> Form PTO-1449 <input checked="" type="checkbox"/> Copies of IDS Citations (B1-B33; C1-C217)	<input type="checkbox"/> CD(s) for large table or computer program <input type="checkbox"/> Amendment After Allowance <input type="checkbox"/> Request for Certificate of Correction <input type="checkbox"/> Certificate of Correction (in duplicate)	
<input type="checkbox"/> Certified Copy of Priority Document(s)		
<input type="checkbox"/> Sequence Listing submission <input type="checkbox"/> Paper Copy/CD <input type="checkbox"/> Computer Readable Copy <input type="checkbox"/> Statement verifying identity of above		

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SIGNATURE BLOCK

Respectfully submitted,

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Reg. No. 38,678
Tel. No.: (617) 570-1299
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VER 12/00



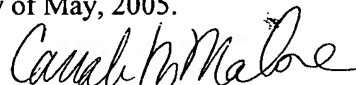
PATENT
Attorney Docket No. LS5-001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S): Liu *et al.*
SERIAL NO.: 10/643,752 GROUP NO.: 1637
FILING DATE: August 19, 2003 EXAMINER: Jezia Riley
TITLE: Evolving New Molecular Function

CERTIFICATE OF FIRST CLASS MAILING UNDER 37 C.F.R. 1.8

I hereby certify that this correspondence, and any document(s) referred to as enclosed herein, is/are being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 6th day of May, 2005.


Carrah M. Malone

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith is/are:

1. Transmittal Form (1 page);
2. Information Disclosure Statement (3 pages);
3. Copies of cited References B1-B33 and C1-C217;
4. Form PTO 1449 (13 pages); and
5. Return receipt postcard.

VER 9/00

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JFW

PATENT
Attorney Docket No. LS5-001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S): Liu *et al.* CONF. NO.: 4082
SERIAL NO.: 10/643,752 GROUP NO.: 1637
FILING DATE: August 19, 2003 EXAMINER: Jezia Riley
TITLE: Evolving New Molecular Function

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with the provisions of 37 C.F.R. 1.97 and 1.98, Applicants hereby make of record the patents and publications listed on the accompanying Form PTO-1449, and other information contained herein, for consideration by the Examiner in connection with the examination of the above-identified patent application. An International Search Report for International Patent Application No. PCT/US02/08546, an International Search Report for International Patent Application No. PCT/US03/25984, and a Supplemental European Search Report for Patent Application No. EP02753671 are cited under C93, C94 and C191, respectively. In accordance with 37 C.F.R. 1.98(a)(2), only copies of the foreign patent documents and non-patent publications are enclosed.

In addition, Applicants wish to inform the Examiner about the following U.S. patent applications and the contents of their file wrappers, including all Office actions issued therein:

1. U.S.S.N. 10/101,030, entitled "Evolving New Molecular Function," filed on March 19, 2002, and published as 2003/0113738, on June 19, 2003;
2. U.S.S.N. 10/744,605, entitled "Evolving New Molecular Function," filed on December 23, 2003, and published as 2005/0025766, on February 3, 2005;
3. U.S.S.N. 10/949,162, entitled "Evolving New Molecular Function," filed on September 24, 2004, and published as 2005/0042669, on February 24, 2005;
4. U.S.S.N. 10/949,163, entitled "Evolving New Molecular Function," filed on September 24, 2004; and

5. U.S.S.N. 10/950,367, entitled "Evolving New Molecular Function," filed on September 24, 2004.

REMARKS

In accordance with the provisions of 37 C.F.R. 1.97, this statement is being filed (CHECK ONE):

- ☒ (1) within three (3) months of the **filing date** of a national application other than a continued prosecution application under 37 C.F.R. 1.53(d), or within three (3) months of the **date of entry of the national stage** as set forth in 37 C.F.R. 1.491 in an international application, or before the mailing of the **first Office action** on the merits, or before the mailing of a **first Office action** after the filing of a request for continued examination under 37 C.F.R. 1.114; or
- ☐ (2) after the period defined in (1) but before the mailing date of a **final action** or a **notice of allowance** under 37 C.F.R. 1.311, and
- ☐ the requisite Statement is below, **OR**
- ☐ the requisite fee under 37 C.F.R. 1.17(p), namely **\$180.00**, is included herein, or
- ☐ (3) after the mailing date of a **final action** or **notice of allowance** but before the payment of the **issue fee**, **AND**
- ☐ the requisite Statement is below, **AND**
- ☐ the requisite petition fee under 37 C.F.R. 1.17(p), namely **\$180.00** is included herein.

It is respectfully requested that each of the patents and publications listed on the attached Form PTO-1449, and other information contained herein, be made of record in this application.

STATEMENT

As required under 37 C.F.R. 1.97(e), Applicant(s), through the undersigned, hereby state either that [check the appropriate space only if either (2) or (3) is checked on the previous page and the Statement is required]:

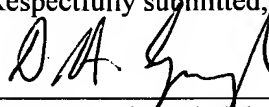
- ☐ 1. Each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application **not more than three months** prior to the filing of the Information Disclosure Statement; or

- ☐ 2. No item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing this Statement after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to **any individual** designated in 37 C.F.R. 1.56(c) **more than three months** prior to the filing of the Information Disclosure Statement.

Date: May 6, 2005
Reg. No. 38,678

Tel. No.: (617) 570-1299
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2466309

Respectfully submitted,



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FORM PTO - 1449 INFORMATION DISCLOSURE STATEMENT				ATTORNEY DOCKET NO.: LS5-001 APPLICANT(S): Liu <i>et al.</i> SERIAL NO.: 10/643,752 FILING DATE: August 19, 2003 GROUP: 1637			
U.S. PATENT DOCUMENTS							
EXAM. INIT.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE	
	A1	2001/0036638 A1	11/1/01	Nolan <i>et al.</i>			
	A2	2002/0034757 A1	3/21/02	Cubiciotti			
	A3	2002/0038000 A1	3/28/02	Gold <i>et al.</i>			
	A4	2002/0064798 A1	5/30/02	Nolan <i>et al.</i>			
	A5	2003/0104389	6/5/03	Sergeev			
	A6	2003/0113738 A1	6/19/2003	Liu <i>et al.</i>			
	A7	2003/0143561 A1	7/31/03	Pedersen <i>et al.</i>			
	A8	2004/0014090 A1	1/22/2004	Neri <i>et al.</i>			
	A9	2005/0025766 A1	2/3/2005	Liu <i>et al.</i>			
	A10	2005/0042669 A1	2/24/2005	Liu <i>et al.</i>			
	A11	4,683,202	7/28/87	Mullis			
	A12	4,863,857	9/5/89	Blalock <i>et al.</i>			
	A13	5,162,218	11/10/92	Schultz			
	A14	5,270,170	12/14/93	Schatz <i>et al.</i>			
	A15	5,539,082	7/23/96	Nielsen <i>et al.</i>			
	A16	5,547,835	8/20/96	Köster			
	A17	5,559,000	9/24/96	Janda <i>et al.</i>			
	A18	5,573,905	11/12/96	Lerner <i>et al.</i>			
	A19	5,574,141	11/12/96	Seliger <i>et al.</i>			
	A20	5,597,697	1/28/97	Diamond			
	A21	5,605,798	2/25/97	Köster			
	A22	5,622,824	4/22/97	Köster			
	A23	5,639,603	6/17/97	Dower <i>et al.</i>			
EXAMINER				DATE CONSIDERED			

FORM PTO - 1449				ATTORNEY DOCKET NO.: LS5-001			
INFORMATION DISCLOSURE STATEMENT				APPLICANT(S): Liu <i>et al.</i>			
				SERIAL NO.: 10/643,752			
				FILING DATE: August 19, 2003 GROUP: 1637			
	A24	5,677,195	10/14/97	Winkler <i>et al.</i>			
	A25	5,691,141	11/25/97	Köster			
	A26	5,698,685	12/16/97	Summerton <i>et al.</i>			
	A27	5,708,153	1/13/98	Dower <i>et al.</i>			
	A28	5,719,262	2/17/98	Buchardt <i>et al.</i>			
	A29	5,721,099	2/24/98	Still <i>et al.</i>			
	A30	5,723,598	3/3/98	Lerner <i>et al.</i>			
	A31	5,770,358	6/23/98	Dower <i>et al.</i>			
	A32	5,786,461	7/28/98	Buchardt <i>et al.</i>			
	A33	5,789,160	8/4/98	Eaton <i>et al.</i>			
	A34	5,789,162	8/4/98	Dower <i>et al.</i>			
	A35	5,811,238	9/22/98	Stemmer <i>et al.</i>			
	A36	5,840,485	11/24/98	Lebl <i>et al.</i>			
	A37	5,843,701	12/1/98	Gold <i>et al.</i>			
	A38	5,846,839	12/8/98	Gallop <i>et al.</i>			
	A39	5,851,765	12/22/98	Köster			
	A40	5,872,003	2/16/99	Köster			
	A41	5,922,545	7/13/99	Mattheakis <i>et al.</i>			
	A42	5,958,691	9/28/99	Pieken <i>et al.</i>			
	A43	5,958,703	9/28/99	Dower <i>et al.</i>			
	A44	5,986,053	11/16/99	Ecker <i>et al.</i>			
	A45	5,998,140	12/7/99	Dervan <i>et al.</i>			
	A46	6,037,120	3/14/00	Brenner			
	A47	6,037,120	3/14/00	Brenner			
	A48	6,060,596	5/9/00	Lerner <i>et al.</i>			
	A49	6,074,823	6/13/00	Köster			
	A50	6,080,826	6/27/00	Grubbs <i>et al.</i>			
EXAMINER				DATE CONSIDERED			

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INFORMATION DISCLOSURE STATEMENT				APPLICANT(S): Liu <i>et al.</i>					
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	A51	6,127,154	10/3/00	Mosbach <i>et al.</i>					
	A52	6,140,053	10/31/00	Köster					
	A53	6,140,493	10/31/00	Dower <i>et al.</i>					
	A54	6,140,496	10/31/00	Benner					
	A55	6,143,497	11/7/00	Dower <i>et al.</i>					
	A56	6,165,717	12/26/00	Dower <i>et al.</i>					
	A57	6,175,001	1/16/01	Barbas <i>et al.</i>					
	A58	6,194,144	2/27/01	Köster					
	A59	6,194,550	2/27/01	Gold <i>et al.</i>					
	A60	6,207,446	3/27/01	Szostak <i>et al.</i>					
	A61	6,214,553	4/10/01	Szostak <i>et al.</i>					
	A62	6,225,450	5/1/01	Köster					
	A63	6,238,871	5/29/01	Köster					
	A64	6,287,765	9/11/01	Cubiciotti					
	A65	6,291,160	9/18/01	Lerner <i>et al.</i>					
	A66	6,291,161	9/18/01	Lerner <i>et al.</i>					
	A67	6,368,874	4/9/02	Gallop <i>et al.</i>					
	A68	6,436,635	8/20/02	Fu <i>et al.</i>					
	A69	6,607,878	8/19/02	Sorge					
	A70	6,680,192	1/20/04	Lerner <i>et al.</i>					

FOREIGN PATENT DOCUMENTS									
EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)
	B1	EP 0 324 616 A	7/19/89	EP					
	B2	WO 91/05058	4/18/91	PCT					
	B3	WO 92/02536	2/20/92	PCT					
	B4	WO 93/06121	4/1/93	PCT					

EXAMINER					DATE CONSIDERED				
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INFORMATION DISCLOSURE STATEMENT					APPLICANT(S): Liu <i>et al.</i>				
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					FILING DATE: August 19, 2003 GROUP: 1637				
	B5	WO 96/09316	9/19/95	PCT					
	B6	DE 196 46 372 C1	11/9/96	DE					
	B7	EP 0 604 552	2/12/97	EP					
	B8	EP 0 773 227	5/14/97	EP					
	B9	WO 00/23458	4/27/00	PCT					
	B10	EP 0 643 778	5/31/00	EP					
	B11	WO 00/47775	8/17/00	PCT					
	B12	WO 00/61775	10/19/00	PCT					
	B13	WO 02/102820	12/27/02	PCT					
	B14	WO 02/103008	12/27/02	PCT					
	B15	WO 03/078050	9/25/2003	PCT					
	B16	WO 03/078445	9/25/03	PCT					
	B17	WO 03/078446	9/25/03	PCT					
	B18	WO 03/078625	9/25/03	PCT					
	B19	WO 03/078626	9/25/03	PCT					
	B20	WO 03/078627	9/25/03	PCT					
	B21	WO 03/082901	10/9/03	PCT					
	B22	WO 04/001042	12/31/03	PCT					
	B23	WO 04/013070	2/12/04	PCT					
	B24	WO 04/024929	3/25/04	PCT					
	B25	WO 04/039825	5/13/04	PCT					
	B26	WO 04/056994	7/8/04	PCT					
	B27	WO 04/074429	9/2/04	PCT					
	B28	WO 04/074501	9/2/04	PCT					
	B29	WO 04/083427	9/30/04	PCT					
	B30	WO 04/110964	12/23/04	PCT					
	B31	WO 05/003778	1/13/05	PCT					
EXAMINER					DATE CONSIDERED				

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INFORMATION DISCLOSURE STATEMENT					APPLICANT(S): Liu <i>et al.</i>				
					SERIAL NO.: 10/643,752				
					FILING DATE: August 19, 2003 GROUP: 1637				
	B32	WO 02/074929 A2	9/26/02	PCT					
	B33	WO 04/016767	2/26/04	PCT					
OTHER ART, JOURNAL ARTICLES, ETC.									
EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)								
	C1	Acevedo <i>et al.</i> , "Non-Enzymatic Transcription of an Oligodeoxynucleotide 14 Residues Long" <i>J. Mol. Biol.</i> 197: 187-193 (1987)							
	C2	Alvarez <i>et al.</i> , "Photocleavable Protecting Groups as Nucleobase Protections Allowed the Solid-Phase Synthesis of Base-Sensitive SATE-Prooligonucleotides" <i>J. Org. Chem.</i> 64: 6319-6328 (1999)							
	C3	Anderson <i>et al.</i> , "A Comparison of Selected mRNA and Protein Abundances in Human Liver" <i>Electrophoresis</i> 18: 533-537 (1997)							
	C4	Arap <i>et al.</i> , "Steps Toward Mapping the Human Vasculature by Phage Display" <i>Nat. Med.</i> 8(2) 121-127 (2002)							
	C5	Arnold <i>et al.</i> , "Directed Evolution of Biocatalysts" <i>Curr. Opin. Chem. Biol.</i> 3: 54-59 (1999)							
	C6	Arnold <i>et al.</i> , "Design by Directed Evolution" <i>Acc. Chem. Res.</i> 31: 125-131 (1998)							
	C7	Bain <i>et al.</i> , "Ribosome-Mediated Incorporation of a Non-Standard Amino Acid into a Peptide Through Expansion of the Genetic Code" <i>Nature</i> 356: 537-539 (1992)							
	C8	Baldwin <i>et al.</i> , "Enzymes in Synthetic Organic Chemistry" <i>Tetrahedron Organic Chemistry Series</i> 12: 1-40							
	C9	Ban <i>et al.</i> , "The Complete Atomic Structure of the Large Ribosomal Subunit at 2.4 Å Resolution" <i>Science</i> 289: 905-920 (2000)							
	C10	Bannwarth <i>et al.</i> , "A Simple and Effective Chemical Phosphorylation Procedure for Biomolecules" <i>Helv. Chim. Acta</i> 70: 175-186 (1987)							
	C11	Barbas <i>et al.</i> , "Phage Display: A Laboratory Manual" <i>Cold Spring Harbor Laboratory Press</i> New York 736 pages (2001) (copy not enclosed)							
	C12	Barbas <i>et al.</i> , <i>Chem. Int. Ed.</i> Vol. 37, 1998. 2872-2875 Benner Reviews							
	C13	Becker <i>et al.</i> , "Synthesis, <i>Sar</i> and <i>In Vivo</i> Activity of Novel Thienopyridine Sulfonamide Pyrrolidinones as Factor <i>Za</i> Inhibitors" <i>Bioorg. Med. Chem. Lett.</i> 9: 2753-2758 (1999)							
	C14	Berger <i>et al.</i> , "Universal Bases for Hybridization, Replication and Chain Termination" <i>Nucleic Acids Research</i> 28(15): 2911-2914 (2000)							
	C15	Blanco <i>et al.</i> , "A Method for Detecting Protein-DNA Interactions at Sites of Chromatin Replication" <i>Analytical Biochemistry</i> 163: 537-545 (1987)							
	C16	Bogarad <i>et al.</i> , "A Hierarchical Approach to Protein Molecular Evolution" <i>Proc. Natl. Acad. Sci. USA</i> 96: 2591-2595 (1999)							
	C17	Böhler <i>et al.</i> , "Template Switching Between PNA and RNA Oligonucleotides" <i>Nature</i> 376: 578-581 (1995)							
	C18	Bolli <i>et al.</i> , "Pyranosyl-RNA: Chiroselective Self-Assembly of Base Sequences by Ligative Oligomerization of Tetranucleotide-2'3'-Cyclophosphates (with a Commentary Concerning the Origin of Biomolecular Homochirality)" <i>Chem. Biol.</i> 4: 309-320 (1997)							
	C19	Boschelli <i>et al.</i> , "Synthesis of Amphotericin B. 2. Fragment C-D of the Aglycone" <i>Tetrahedron Lett.</i> 26: 5239-5242 (1985)							
	C20	Bostwick <i>et al.</i> , "RPR120844, A Novel, Specific Inhibitor of Coagulation Factor Xa Inhibits Venous Thrombosis in the Rabbit" <i>Thromb Haemost.</i> 81: 157-160 (1999)							
	C21	Brenner <i>et al.</i> , "Encoded Combinatorial Chemistry" <i>Proc. Natl. Acad. Sci.</i> 89: 5381-5383 (1992)							
EXAMINER					DATE CONSIDERED				

FORM PTO - 1449		ATTORNEY DOCKET NO.: LS5-001
INFORMATION DISCLOSURE STATEMENT		APPLICANT(S): Liu <i>et al.</i>
		SERIAL NO.: 10/643,752
		FILING DATE: August 19, 2003 GROUP: 1637
	C22	Brenner <i>et al.</i> , "In Vitro Cloning of Complex Mixtures of DNA on Microbeads: Physical Separation of Differentially Expressed cDNAs" <i>Proc. Natl. Acad. Sci. USA</i> 97(4): 1665-1670 (2000)
	C23	Bresler <i>et al.</i> , "Stability of Peptidyl-tRNA – The Intermediate of Protein Synthesis" <i>Biochimica et Biophysica Acta</i> 155: 465-475 (1968)
	C24	Brooks <i>et al.</i> , "Antiintegrin $\alpha\beta_3$ Blocks Human Breast Cancer Growth and Angiogenesis in Human Skin" <i>J. Clin. Invest.</i> 96: 1815-1822 (1995)
	C25	Brooks <i>et al.</i> , "Disruption of Angiogenesis by PEX, a Noncatalytic Metalloproteinase Fragment with Integrin Binding Activity" <i>Cell</i> 92: 391-400 (1998)
	C26	Brooks <i>et al.</i> , Integrin $\alpha\beta_3$ Antagonists Promote Tumor Regression by Inducing Apoptosis of Angiogenic Blood Vessels" <i>Cell</i> 79: 1157-1164 (1994)
	C27	Bruick <i>et al.</i> , "Template-Directed Ligation of Peptides to Oligonucleotides" <i>Chem. Biol.</i> 3: 49-56 (1996)
	C28	Cadwell <i>et al.</i> , "Randomization of Genes by PCR Mutagenesis" <i>PCR Methods Appl.</i> 2: 28-33 (1992)
	C29	Celewicz <i>et al.</i> , "Mass Spectrometry of Some Derivatives of 5-(Indol-2-yl) Pyrimidine" <i>Pol. J. Chem.</i> 72: 725-734 (1998)
	C30	Chan <i>et al.</i> , "Intra-tRNA distance measurements for nucleocapsid protein-dependent tRNA unwinding during priming of HIV reverse transcription" <i>Proc. Natl. Acad. Sci. USA</i> 96: 459-464 (1999)
	C31	Chen <i>et al.</i> , "Template-Directed Synthesis on Oligodeoxycytidylate and Polydeoxycytidylate Templates" <i>J. Mol. Biol.</i> 181: 271-279 (1985)
	C32	Cho <i>et al.</i> , "An Unnatural Biopolymer" <i>Science</i> 261: 1303-1305 (1993)
	C33	Choi <i>et al.</i> , "Inhibition of Neointimal Hyperplasia by Blocking $\alpha\beta_3$ Integrin with a Small Peptide Antagonist Gpen GRGDSPCA" <i>J. Vasc. Surg.</i> 19: 125-134 (1994)
	C34	Choi-Sledeski <i>et al.</i> , "Sulfonamidopyrrolidinone Factor Xa Inhibitors: Potency and Selectivity Enhancements via P-1 and P-4 Optimization" <i>J. Med. Chem.</i> 42: 3572-3587 (1999)
	C35	Collado <i>et al.</i> , "Diastereoselective Functionalization of 5-Hydroxy Prolinates by Tandem Horner-Emmons-Michael Reaction" <i>Tetrahedron Lett.</i> 35: 8037 (1994)
	C36	Compton, "Nucleic Acid Sequence-Based Amplification" <i>Nature</i> 350: 91-92 (1991)
	C37	Czlapinski <i>et al.</i> , "Nucleic Acid Template-Directed Assembly of Metallosalen-DNA Conjugates" <i>J. Am. Chem. Soc.</i> 123: 8618-8619 (2001)
	C38	Davis, "Intermediates in Amino Acid Biosynthesis" <i>Adv. Enzymol.</i> 16: 287-295 (1955)
	C39	Dechantsreiter <i>et al.</i> , "N-Methylated Cyclic RGD Peptides as Highly Active and Selective $\alpha\beta_3$ Integrin Antagonists" <i>J. Med. Chem.</i> 42: 3033-3040 (1999)
	C40	Dewey <i>et al.</i> , "New Uridine Derivatives for Systematic Evolution of RNA Ligands b Exponential Enrichment" <i>J. Am. Chem. Soc.</i> 117: 8474-8475 (1995)
	C41	Dietz <i>et al.</i> , "Photochemical Reduction of 5-Bromouracil by Cystine Derivatives and Coupling of 5-Bromouracil to Cystine Derivatives: <i>Photochemistry and Photobiology</i> 49(2): 121-129 (1989)
	C42	Drews, "Drug Discovery: A Historical Perspective" <i>Science</i> 287: 1960-1964 (2000)
	C43	Eaton, "The Joys of In Vitro Selection: Chemically Dressing Oligonucleotides to Satisfy Protein Targets" <i>Current Opinion in Chemical Biology</i> 1: 10-16 (1997)
	C44	El-Dorry, "Purification of mRNA Coding for Rat-Liver Fructose- 1,6-bisphosphatase by polysome immunoabsorption" <i>Biochimica et Biophysica Acta</i> 867: 252-255 (1986)
	C45	Eliseev <i>et al.</i> , "Dynamic Combinatorial Chemistry: Evolutionary Formation and Screening of Molecular Libraries" <i>Combinatorial Chemistry in Biology</i> 243: 159-172 (1999)
	C46	Ellis <i>et al.</i> , "Functional Analysis of the T-Cell Restricted Protein Tyrosine Kinase TxK" <i>Biochem. J.</i> 335: 277-284 (1998)
	C47	Ewing <i>et al.</i> , "Design and Structure – Activity Relationships of Potent and Selective Inhibitors of Blood Coagulation Factor Xa" <i>J. Med. Chem.</i> 42: 3557-3571 (1999)
EXAMINER		DATE CONSIDERED

FORM PTO - 1449		ATTORNEY DOCKET NO.: LS5-001
INFORMATION DISCLOSURE STATEMENT		APPLICANT(S): Liu <i>et al.</i>
		SERIAL NO.: 10/643,752
		FILING DATE: August 19, 2003 GROUP: 1637
	C48	Famulok <i>et al.</i> , "Oligonucleotide Libraries-Variatio Delectat" <i>Curr. Opin. Chem. Biol.</i> 2 : 320-327 (1998)
	C49	Fenn <i>et al.</i> , "Direct Quantitation of Biotin-Labeled Nucleotide Analogs in RNA Transcripts" <i>Analytical Chemistry</i> 190 : 78-83 (1990)
	C50	Fleet <i>et al.</i> , "Enantiospecific Synthesis of Shikimic Acid from D-Mannose: Formation of a Chiral Cyclohexene by Intramolecular Olefination of a Carbohydrate-Derived Intermediate" <i>J. Chem. Soc. Perkins, Trans. I</i> : 905-908 (1984)
	C51	Fleischer <i>et al.</i> , "Conversion of Aliphatic and Alicyclic Polyalcohols to the Corresponding Primary Polyamines" <i>J. Org. Chem.</i> 36 (20): 3042-3044 (1971)
	C52	Francis <i>et al.</i> , "Combinatorial Libraries of Transition-Metal Complexes, Catalysts and Materials" <i>Curr. Opin. Chem. Biol.</i> 2 : 422-428 (1998)
	C53	Francis <i>et al.</i> , "Discovery of Novel Catalysts for Alkene Epoxidation from Metal-Binding Combinatorial Libraries" <i>Angew. Chem. Int. Ed. Engl.</i> 38 : 937-941 (1999)
	C54	Frankel <i>et al.</i> , "Encodamers: Unnatural Peptide Oligomers Encoded in RNA" <i>Chemistry and Biology</i> 10 : 1043-1050 (2003)
	C55	Friedlander <i>et al.</i> , "Definition of Two Angiogenic Pathways by Distinct α Integrins" <i>Science</i> 270 : 1500-1502 (1995)
	C56	Fruchart <i>et al.</i> , "A New Linker for the Synthesis of C-Terminal Peptide α -oxo-Aldehydes" <i>Tetrahedron Lett.</i> 40 : 6225 (1999)
	C57	Fruchtel <i>et al.</i> , "Organic Chemistry on Solid Supports" <i>Angew. Chem. Int. Ed. Engl.</i> 35 : 17-42 (1996)
	C58	Gad, "Synaptic Vesicle endocytosis studied in a living synapse" <i>Nobel Institute for Neurophysiology, Karolinska Institutet, Sweden</i> 1-48 (2000)
	C59	Gallop <i>et al.</i> , "Applications of Combinatorial Technologies to Drug Discovery, 1. Background and Peptide Combinatorial Libraries" <i>J. Med. Chem.</i> 37 : 1233-1251 (1994)
	C60	Gartner <i>et al.</i> , "The Generality of DNA-Templated Synthesis as a Basis for Evolving Non-Natural Small Molecules" <i>J. Am. Chem. Soc.</i> 123 : 6961-6963 (2001)
	C61	Gat <i>et al.</i> , "Reading DNA Differently" <i>Biopolymers</i> 48 : 19-28 (1998)
	C62	Gevorkian <i>et al.</i> "Rapid Communication Identification of Autoimmune Thrombocytopenic Purpura-Related Epitopes using Phage-Display Peptide Library" <i>Clin. Immunol. Immunopathol</i> 86 : 305-309 (1998)
	C63	Geyer <i>et al.</i> , "Conformational Analysis of a Cyclic RGD Peptide Containing a Ψ [CH ₂ - NH] Bond: A Positional Shift in Backbone Structure Caused by a Single Dipeptide Mimetic" <i>J. Am. Chem. Soc.</i> 116 : 7735-7743 (1994)
	C64	Gilbertson <i>et al.</i> , "Asymmetric Catalysis with Libraries of Palladium β -Turn Phosphine Complexes" <i>J. Am. Chem. Soc.</i> 122 : 6522-6523 (2000)
	C65	Gocke, "Mechanism of Quinolone Mutagenicity in Bacteria" <i>Mutation Research</i> 248 : 135-143 (1991)
	C66	Gordon <i>et al.</i> , Applications of Combinatorial Technologies to Drug Discovery. 2. Combinatorial Organic Synthesis, Library Screening Strategies, and Future Directions," <i>J. Med. Chem.</i> 37 (10): 1385-1401 (1994).
	C67	Gourlain <i>et al.</i> , "Enhancing the Catalytic Repertoire of Nucleic Acids. II. Simultaneous Incorporation of Amino and Imidazolyl Functionalities by Two Modified Triphosphates During PCR" <i>Nucleic Acids Res.</i> 29 : 1898-1905 (2001)
	C68	Greene <i>et al.</i> , "Protective Groups in Organic Synthesis", 780 pages Wiley & Sons (1999) (copy not enclosed)
	C69	Grubina <i>et al.</i> , "Summer Research Report: DNA-Templated Synthesis of a Synthetic Small Molecule Library" <i>The Nucleus</i> 10-14 , January 2004
	C70	Gryaznov <i>et al.</i> , "Chemical Ligation of Oligonucleotides in the Presence and Absence of a Template" <i>J. Am. Chem. Soc.</i> 115 : 3808-3809 (1993)
	C71	Gryaznov <i>et al.</i> , "Template Controlled Coupling and Recombination of Oligonucleotide Blocks Containing Thiophosphoryl Groups" <i>Nucleic Acids Research</i> 21 (6): 1403-1408 (1993)
	C72	Guatelli <i>et al.</i> , "Isothermal, In Vitro Amplification of Nucleic Acids by a Multienzyme Reaction Modeled After Retroviral Replication" <i>Proc. Natl. Acad. Sci.</i> 87 : 1874-1878 (1990)
	C73	Gyllensten <i>et al.</i> , "Generation of Single-Stranded DNA by the Polymerase Chain Reaction and its Application to Direct Sequencing of the HLA-DQA locus", <i>PNAS</i> 85 : 7652-7656 (1988).
EXAMINER		DATE CONSIDERED

FORM PTO - 1449		ATTORNEY DOCKET NO.: LS5-001
INFORMATION DISCLOSURE STATEMENT		APPLICANT(S): Liu <i>et al.</i>
		SERIAL NO.: 10/643,752
		FILING DATE: August 19, 2003 GROUP: 1637
	C74	Haaime <i>et al.</i> , "Peptide Nucleic Acids (PNAs) Containing Thymine Monomers Derived from Chiral Amino Acids: Hybridization and Solubility Properties of D-Lysine PNA" <i>Angew. Chem. Int. Ed. Engl.</i> 35 : 1939-1942 (1996)
	C75	Haeuptle <i>et al.</i> , "Translation Arrest by Oligodeoxynucleotides Complementary to mRNA Coding Sequences Yields Polypeptides of Predetermined Length" <i>Nucleic Acids Research</i> 14 (3): 1427-1448 (1986)
	C76	Hamburger <i>et al.</i> , "Peptidyl-tRNA XI. The Chemical Synthesis of Phenylalanine-Containing Oligopeptidyl-tRNA" <i>Biochimica et Biophysica Acta</i> , 213 : 115-123 (1970)
	C77	Haubner <i>et al.</i> , "Structural and Functional Aspects of RGD-Containing Cyclic Pentapeptides as Highly Potent and Selective Integrin $\alpha\beta_3$ Antagonists" <i>J. Am. Chem. Soc.</i> 118 : 7461-7472 (1996)
	C78	Herrera-Estrella <i>et al.</i> , "VirD Proteins of Agrobacterium Tumefaciens are Required for the Formation of a Covalent DNA - Protein Complex at the 5' Terminus of T-Strand Molecules" <i>The EMBO Journal</i> 7 (13): 4055-4062 (1988)
	C79	Herrlein <i>et al.</i> , "A Covalent Lock for Self-Assembled Oligonucleotide Conjugates" <i>J. Am. Chem. Soc.</i> 117 : 1-151-10152 (1995)
	C80	Heywood <i>et al.</i> , "A Study of Muscle Polyribosomes and the Coprecipitation of Polyribosomes with Myosin" <i>J. Biol. Chem.</i> 7 : 3289-3296 (1968)
	C81	Heywood <i>et al.</i> , "The Identification of Polyribosomes Synthesizing Myosin" <i>PNAS</i> 57 : 1002-1009 (1967)
	C82	Hirama <i>et al.</i> , "Asymmetric Induction in the Intramolecular Conjugate Addition of - or δ - Carbamoyloxy - , β -Unsaturated Esters. A New Method for Diastereoselective Amination and Divergent Synthesis of 3-Amino-2,3,6-Trideoxyhexoses" <i>Heterocycles</i> 28 : 1229-1247 (1989)
	C83	Hirama <i>et al.</i> , "Intramolecular Michael Addition of O-Carbamates to α,β Unsaturated Esters: A New Diastereoselective Amination in an Acyclic System" <i>J. Am. Chem. Soc.</i> 107 : 1797-1798 (1985)
	C84	Hooper <i>et al.</i> , "Mode of Action of the New Quinolones: New Data" <i>Eur. J. Clin. Microbiol. Infect. Dis.</i> 10 (4): 223-231 (1991)
	C85	Houdebine <i>et al.</i> , "Purification of the mRNAs for Ewe α_s -Casein and β -Casein by Immunoprecipitation of Polysomes" <i>Eur. J. Biochem.</i> 63 : 9-14 (1976)
	C86	House <i>et al.</i> , "The Chemistry of Carbanions. XVII. The Addition of Methyl Organometallic Reagents to Cyclohexenone Derivatives" <i>J. Org. Chem.</i> 33 : 949 (1968)
	C87	Hughes, "Application of Polymer-Bound Phosphonium Salts as Traceless Supports for Solid" <i>Tetrahedron Lett.</i> 37 : 7595-7598 (1996)
	C88	Hyrup <i>et al.</i> , "Peptide Nucleic Acids (PNA): Synthesis, Properties and Potential Applications" <i>Bioorganic & Medical Chemistry</i> 4 (1): 5-23 (1996)
	C89	Illuminati <i>et al.</i> , "Ring Closure Reactions of Bifunctional Chain Molecules" <i>Acc. Chem. Res.</i> 14 : 95-102 (1981)
	C90	Inoue <i>et al.</i> , "Oligomerization of (Guanosine 5' -Phosphor)-2-Methylimidazole on Poly(C): An RNA Polymerase Model" <i>J. Mol. Biol.</i> 162 : 201-217 (1982)
	C91	Inoue <i>et al.</i> , "Substituent Control of the Poly(C) - Directed Oligomerization of Guanosine 5' - Phosphorimidazole" <i>J. Am. Chem. Soc.</i> 103 : 7666-7667 (1981)
	C92	Inoue <i>et al.</i> , "Template-Directed Synthesis on the Pentanucleotide CpCpGpCpC" <i>J. Mol. Biol.</i> 178 : 669-676 (1984)
	C93	International Search Report for Application No. PCT/US02/08546 dated December 17, 2002
	C94	International Search Report for Application No. PCT/US03/25984 dated January 18, 2005
	C95	Ito <i>et al.</i> , "Acetone-Sensitized Photocoupling of 5-Bromouridine to Tryptophan Derivatives via Electron-Transfer Process" <i>J. Amer. Chem. Soc.</i> 102 : 7535-7541 (1980)
	C96	Jemth <i>et al.</i> , "Kinetic Characterization of Recombinant Human Glutathione Transferase T1-1, A Polymorphic Detoxication Enzyme" <i>Arch. Biochem. Biophys.</i> 348 (2): 247-54 (1997)
	C97	Johansson <i>et al.</i> , "Regioselctive Reductive Ring-Opening of 4-Methoxybenzylidene Acetals of Hexopyranosides. Access to a Novel Protecting-Group Strategy. Part I" <i>J. Chem. Soc. Perkins Trans. I</i> : 2371-2374 (1984)
	C98	Johnson <i>et al.</i> , "Evidence for Posttranslational O-Glycosylation of Fetuin" <i>Biochemistry</i> 25 : 5518-5525 (1986)
EXAMINER		DATE CONSIDERED

FORM PTO - 1449		ATTORNEY DOCKET NO.: LS5-001
INFORMATION DISCLOSURE STATEMENT		APPLICANT(S): Liu <i>et al.</i>
		SERIAL NO.: 10/643,752
		FILING DATE: August 19, 2003 GROUP: 1637
	C99	Johnston <i>et al.</i> , "RNA-Catalyzed RNA Polymerization: Accurate and General RNA-Templated Primer Extension" <i>Science</i> 292 : 1319-1325 (2001)
	C100	Jost <i>et al.</i> , "Quantitative Precipitation of Short Oligonucleotides with Low Concentrations of Cetyltrimethylammonium Bromide" <i>Nucleic Acids Res.</i> 17 : 2143 (1989)
	C101	Kahl <i>et al.</i> , "Introducing Structural Diversity in Oligonucleotides via Photolabile, Convertible C5-Substituted Nucleotides" <i>J. Am. Chem. Soc.</i> 121 (4): 597-604 (1999)
	C102	Keiler <i>et al.</i> , "Role of a Peptide Tagging System in Degradation of Proteins Synthesized from Damaged Messenger RNA" <i>Science</i> 271 : 990-993 (1996)
	C103	King <i>et al.</i> , "Bis (Dialkylamino) Phosphines" <i>J. Org. Chem.</i> 49 : 1784-1789 (1984)
	C104	Kinoshita <i>et al.</i> , "Enzymatic Synthesis of Code Regions for Encoded combinatorial Chemistry (ECC)" <i>Nucleic Acids Symposium Series</i> 34 : 201-202 (1995)
	C105	Kuntz <i>et al.</i> , "Combinatorial Catalyst Discovery" <i>Current Opinion in Chemical Biology</i> 3 : 313-319 (1999)
	C106	Kupsch <i>et al.</i> , "Isolation of Human Tumor-Specific Antibodies by Selection of an Antibody Phage Library on Melanoma Cells" <i>Clin Cancer Res.</i> 5 : 925-931 (1999)
	C107	Latham <i>et al.</i> , "The Application of a Modified Nucleotide in Aptamer Selection: Novel Thrombin Aptamers Containing 5-(Pentynyl)-2'-Deoxyuridine" <i>Nucleic Acids Res.</i> 22 : 2817-2822 (1994)
	C108	Leadley <i>et al.</i> , "Pharmacodynamic Activity and Antithrombotic Efficacy of RPR120844, a Novel Inhibitor of Coagulation Factor Xa" <i>J. Cardiovasc. Pharmacol.</i> 34 : 791-799 (1999)
	C109	Lee <i>et al.</i> , "Enhancing the Catalytic Repertoire of Nucleic Acids: a Systematic Study of Linker Length and Rigidity" <i>Nucleic Acids Res.</i> 29 : 1565-1573 (2001)
	C110	Leon <i>et al.</i> , "Covalent Coupling of 4-Thiouridine in the Initiator Methionine tRNA to Specific Lysine Residues in <i>Escherichia Coli</i> Methionyl-tRNA Synthetase" <i>Biochemistry</i> 26 : 7113-7121 (1987)
	C111	Li <i>et al.</i> , "DNA-Catalyzed Polymerization" <i>J. Am. Chem. Soc.</i> 124 : 746-747 (2002)
	C112	Li <i>et al.</i> , "A Catalytic DNA for Porphyrin Metallation" <i>Nat. Struct. Biol.</i> 3 : 743-747 (1996)
	C113	Li <i>et al.</i> , "Capping DNA with DNA" <i>Biochemistry</i> 39 : 3106-3114 (2000)
	C114	Li <i>et al.</i> , "Chemical Self-Replication of Palindromic Duplex DNA" <i>Nature</i> 369 : 218-221 (1994)
	C115	Li <i>et al.</i> , "Phosphorylating DNA with DNA" <i>Proc. Natl. Acad. Sci. USA</i> 96 : 2746-2751 (1999)
	C116	Li <i>et al.</i> , "Toward an Efficient DNAzyme" <i>Biochemistry</i> 36 : 5589-5599 (1997)
	C117	Lin <i>et al.</i> , "Formation of an Amino-Acid-Binding Pocket Through Adaptive Zippering-Up of a Large DNA Hairpin Loop" <i>Chem. Biol.</i> 5 : 555-572 (1998)
	C118	Lin <i>et al.</i> , "Structural Basis of DNA Folding and Recognition in an AMP-DNA Aptamer Complex: Distinct Architectures But Common Recognition Motifs for DNA and RNA Aptamers Complexed to AMP" <i>Chem. Biol.</i> 4 : 817-832 (1997)
	C119	Liu <i>et al.</i> , "Generating New Molecular Function: A Lesson from Nature" <i>Angew. Chem. Intl. Ed. Eng.</i> 38 : 37-54 (1999)
	C120	Loss, "Spin-based Quantum Information Processing in Nanostructures" <i>Dept. of Phys., Univ. of Basel, Switzerland.</i>
	C121	Luo <i>et al.</i> , "Analysis of the Structure and Stability of a Backbone-Modified Oligonucleotide: Implications for Avoiding Product Inhibition in Catalytic Template-Directed Synthesis" <i>J. Am. Chem. Soc.</i> Vol. 120, No. 13: 3019-3031 (1998)
	C122	Luther <i>et al.</i> , "Surface-Promoted Replication and Exponential Amplification of DNA Analogues" <i>Nature</i> 396 : 245-248 (1998)
	C123	Lynn <i>et al.</i> , "Water-Soluble Ruthenium Alkylidenes: Synthesis, Characterization, and Application to Olefin Metathesis in Protic Solvents" <i>J. Am. Chem. Soc.</i> 122 : 6601-6609 (2000)
	C124	Lynn <i>et al.</i> , "Living Ring-Opening Metathesis Polymerization in Water" <i>J. Am. Chem. Soc.</i> 120 : 1627-1628 (1998)
EXAMINER		DATE CONSIDERED

FORM PTO - 1449		ATTORNEY DOCKET NO.: LS5-001
INFORMATION DISCLOSURE STATEMENT		APPLICANT(S): Liu <i>et al.</i>
		SERIAL NO.: 10/643,752
		FILING DATE: August 19, 2003 GROUP: 1637
	C125	MacLean <i>et al.</i> , "Encoded Combinatorial Chemistry Synthesis and Screening of a Library of Highly Functionalized Pyrrolidines" <i>Proc. Natl. Acad. Sci. USA</i> 94: 2805-2810 (1997)
	C126	Magid, "Nucleophilic and Organometallic Displacement Reactions of Allylic Compounds: Stereo- and Regiochemistry" <i>Tetrahedron</i> 36: 1901-1930 (1980)
	C127	Mahal <i>et al.</i> , "Engineering Chemical Reactivity on Cell Surfaces Through Oligosaccharid Biosynthesis" <i>Science</i> 276: 1125-1128 (1997)
	C128	Maignan <i>et al.</i> , "Crystal Structures of Human FactorXa Complexed with Potent Inhibitors" <i>J. Med. Chem.</i> 43: 3226-3232 (2000)
	C129	Marks <i>et al.</i> , "Molecular Evolution of Proteins on Filamentous Phage" <i>J. Biol. Chem.</i> 267(23): 16007-16010 (1992)
	C130	Marlowe <i>et al.</i> , "Design, Synthesis and Structure-Activity Relationship of a Series of Arginine Aldehyde Factor Xa Inhibitors. Part 1: Structures Based on the (D)-Arg-Gly-Arg Tripeptide Sequence" <i>Bioorg. Med. Chem. Lett.</i> 10: 13-16 (2000)
	C131	Mattheakis <i>et al.</i> , "An In Vitro Polysome Display System for Identifying Ligands from Very Large Peptide Libraries" <i>Proc. Natl. Acad. Sci. USA</i> 91: 9022-9026 (1994)
	C132	Mel'nikov <i>et al.</i> , "Solubilization of DNA-Cationic Lipid Complexes in Hydrophobic Solvents. A Single-Molecule Visualization by Fluorescence Microscopy" <i>Langmuir</i> 15: 1923-1928 (1999)
	C133	Minshull <i>et al.</i> , "Protein Evolution by Molecular Breeding" <i>Curr. Opin. Chem. Biol.</i> 3: 284-290 (1999)
	C134	Mirza <i>et al.</i> , "Synthesis of Shikimic Acid And Its Phosphonate Analogue Via Knoevenagel Condensation" <i>Tetrahedron Lett.</i> 32: No. 33, 4111-4114 (1991)
	C135	Miyamoto-Sato <i>et al.</i> , "Highly stable and efficient mRNA templates for mRNA-protein fusions and C-terminally labeled proteins" <i>Nucleic Acids Research</i> Vol. 31 No. 15 e78 (2003)
	C136	Mohr <i>et al.</i> , "Synthesis of Water-Soluble, Aliphatic Phoshines and Their Application to Well-Defined Ruthenium Olefin Metathesis Catalysts" <i>Organometallics</i> 15: 4317-4325 (1996)
	C137	Muth <i>et al.</i> , "A Single Adenosine with a Neutral pK _a in the Ribosomal Peptidyl Transferase Center" <i>Science</i> 289: 947-950 (2000)
	C138	Nagasaka <i>et al.</i> , "Wittig Reactions of 1-Alkoxycarbonyl-2-Hydroxypyrrolidines and -Piperidines: Synthesis of (±) - Hygrine and ((±) -2-Epilasubine II" <i>Heterocycles</i> 29: 155 (1989)
	C139	Nakano <i>et al.</i> , "General Acid-Base Catalysis in the Mechanism of a Hepatitis Delta Virus Ribozyme" <i>Science</i> 287: 1493-1497 (2000)
	C140	Nazarenko <i>et al.</i> , "A closed tube format for amplification and detection of DNA based on energy transfer" <i>Nucleic Acid Research</i> 25(12): 2516-2521 (1997)
	C141	Nemoto <i>et al.</i> , "In vitro virus: Bonding of mRNA bearing puromycin at the 3'-terminal end to the C-terminal end of its encoded protein on the ribosome in vitro" <i>European Biochemical Societies Letters</i> 414: 405-408 (1997)
	C142	Nissen <i>et al.</i> , "The Structural Basis of Ribosome Activity in Peptide Bond Synthesis" <i>Science</i> 289: 920-930 (2000)
	C143	Nolte <i>et al.</i> , "Mirror-Design of L-Oligonucleotide Ligands Binding to L-Arginine" <i>Nature Biotechnology</i> 14: 1116-1121 (1996)
	C144	Norris <i>et al.</i> , "Mechanistic Studies of the 5-Iodouracil Chromophore Relevant to Its Use in Nucleoprotein Photo-Cross-Linking" <i>J. Amer. Chem. Soc.</i> 118: 5796-5803 (1996)
	C145	Olofson <i>et al.</i> , "Selective N-Dealkylation of Tertiary Amines with Vinyl Chloroformate: An Improved Synthesis of Naloxone" <i>Tetrahedron Lett.</i> 18: 1567-1570 (1977)
	C146	Olofson <i>et al.</i> , "Use of the Vinyloxycarbonyl Group for Amino Protection in Peptide Synthesis" <i>Tetrahedron Lett.</i> 18: 1563-1566 (1977)
	C147	Olofson <i>et al.</i> , "Value of Vinyloxycarbonyl Unit in Hydroxyl Protection: Application to the Synthesis of Nalorphine" <i>Tetrahedron Lett.</i> 18: 1571-1574 (1977)
	C148	Orgel <i>et al.</i> , "Unnatural Selection in Chemical Systems" <i>Acc. Chem. Res.</i> 28: 109-118 (1995)
	C149	Pagratz <i>et al.</i> , "Potent 2'-Amino-, and 2'-Fluoro-2'- Deoxyribonucleotide RNA Inhibitors of Keratinocyte Growth Factor" <i>Nature Biotechnology</i> 15: 68-72 (1997)
EXAMINER		DATE CONSIDERED

FORM PTO - 1449		ATTORNEY DOCKET NO.: LS5-001
INFORMATION DISCLOSURE STATEMENT		APPLICANT(S): Liu <i>et al.</i>
		SERIAL NO.: 10/643,752
		FILING DATE: August 19, 2003 GROUP: 1637
	C150	Pasqualini <i>et al.</i> , "Aminopeptidase N Is a Receptor for Tumor-homing Peptides and a Target for Inhibiting Angiogenesis" <i>Cancer Res.</i> 60: 722-727 (2000)
	C151	Pasqualini <i>et al.</i> , "Organ Targeting In Vivo Using Phage Display Peptide Libraries" <i>Nature</i> 380: 364-366 (1996)
	C152	Pedersen <i>et al.</i> , "A Method for Directed Evolution and Functional Cloning of Enzymes" <i>Proc. Natl. Acad. Sci. USA</i> 95: 10523-10528 (1998)
	C153	Perrin <i>et al.</i> , "Bridging the Gap Between Protein and Nucleic Acids: A Metal-Independent RNaseA Mimic with Two Protein-Like Functionalities" <i>J. Am. Chem. Soc.</i> 123: 1556-1563 (2001)
	C154	Perrin <i>et al.</i> , "Expanding the Catalytic Repertoire of Nucleic Acid Catalysts: Simultaneous Incorporation of Two Modified Deoxyribonucleoside Triphosphates Bearing Ammonium and Imidazolyl Functionalities" <i>Nucleosides & Nucleotides</i> 18: 377-391 (1999)
	C155	Pfaff <i>et al.</i> , "Selective Recognition of Cyclic RGD Peptides of NMR Defined Conformation of α IIb β 3, α 5 β 1 Integrins" <i>J. Biol. Chem.</i> 269: 20233-20238 (1994)
	C156	Polacek <i>et al.</i> , "Ribosomal Peptidyl Transferase can Withstand Mutations at the Putative Catalytic Nucleotide" <i>Nature</i> 411: 498-501 (2001)
	C157	Püschl <i>et al.</i> , "Peptide Nucleic Acids (PNAs) with a Functional Backbone" <i>Tetrahedron Lett.</i> 39: 4707-4710 (1998)
	C158	Rai <i>et al.</i> , "Development of Potent and Selective Factor Xa Inhibitors" <i>Bioorg. Med. Chem. Lett.</i> 11: 1797-1800 (2001)
	C159	Rembold <i>et al.</i> , "Single-Strand Regions of Poly(G) Act as Templates for Oligo(C) Synthesis" <i>J. Mol. Evol.</i> 38: 205-210 (1994)
	C160	Roberts <i>et al.</i> , "RNA-Peptide Fusions for the In Vitro Selection of Peptides and Proteins" <i>Proc. Natl. Acad. Sci. USA</i> 94: 12297-12302 (1997)
	C161	Rodriguez <i>et al.</i> , "Template-Directed Extension of a Guanosine 5'-Phosphate Covalently Attached to an Oligodeoxycytidylate Template" <i>J. Mol. Evol.</i> 33: 477-482 (1991)
	C162	Saiki <i>et al.</i> , "Enzymatic Amplification of β -Globin Genomic Sequences and Restriction Site Analysis for Diagnosis of Sickle Cell Anemia" <i>Science</i> 230: 1350-1354 (1985)
	C163	Sakthivel <i>et al.</i> , "Expanding the Potential of DNA for Binding and Catalysis: Highly Functionalized dUTP Derivatives That Are Substrates for Thermostable DNA Polymerases" <i>Angew. Chem. Int. Ed.</i> 37: 2872-2875 (1998)
	C164	Salas <i>et al.</i> , "Biosynthetic Polydeoxynucleotides as Direct Templates for Polypeptide Synthesis" <i>Journal of Biological Chemistry</i> 243(5): 1012-1015 (1968)
	C165	Santoro <i>et al.</i> , "A General Purpose RNA-Cleaving DNA Enzyme" <i>Proc. Natl. Acad. Sci. USA</i> 94: 4262-4266 (1997)
	C166	Saxon <i>et al.</i> , "A 'Traceless' Staudinger Ligation for the Chemoselective Synthesis of Amide Bonds" <i>Organic Letters</i> 2(14): 2141-2143 (2000)
	C167	Scharf <i>et al.</i> , "Direct Cloning and Sequence Analysis of Enzymatically Amplified Genomic Sequences" <i>Science</i> 233: 1076-1078 (1986)
	C168	Scheffer <i>et al.</i> , "Selection and Characterisation of a Phage-Displayed Human Antibody (Fab) Reactive to the Lung Resistance-Related Major Vault Protein" <i>Br. J. Cancer</i> 86: 954-962 (2002)
	C169	Schmidt <i>et al.</i> , "Information Transfer from DNA to Peptide Nucleic Acids by Template-Directed Syntheses" <i>Nucleic Acids Research</i> 25(23): 4792-4796 (1997)
	C170	Schmidt-Dannert <i>et al.</i> , "Directed Evolution of Industrial Enzymes" <i>Trends Biotechnol.</i> 17: 135-136 (1999)
	C171	Scholl <i>et al.</i> , "Synthesis and Activity of a New Generation of Ruthenium-Based Olefin Metathesis Catalysts Coordinated with 1,3-Dimesityl-4,5-Dihydroimidazol-2-Ylidene Ligands" <i>Org. Lett.</i> 1(6): 953-956 (1999)
	C172	Schultze <i>et al.</i> , "Three-Dimensional Solution Structure of the Thrombin-Binding DNA Aptamer d(GGTTGGTGTGGTTGG)" <i>J. Mol. Biol.</i> 235: 1532-1547 (1994)
	C173	Schwartz <i>et al.</i> , "Template-Directed Synthesis of Novel, Nucleic Acid-Like Structures" <i>Science</i> 228: 585-587 (1985)
	C174	Scott, "How Were Porphyrins and Lipids Synthesized in the RNA World?" <i>Tetrahedron Lett.</i> 38: 4961-4964 (1997)
EXAMINER		DATE CONSIDERED

FORM PTO - 1449		ATTORNEY DOCKET NO.: LS5-001
INFORMATION DISCLOSURE STATEMENT		APPLICANT(S): Liu <i>et al.</i>
		SERIAL NO.: 10/643,752
		FILING DATE: August 19, 2003 GROUP: 1637
	C175	Seeberger <i>et al.</i> , "Solid-Phase Oligosaccharide Synthesis and Combinatorial Carbohydrate Libraries" <i>Chem. Rev.</i> 100 : 4349-4393 (2000)
	C176	Seeberger, P.H., Ed., "Solid Support Oligosaccharide Synthesis and Combinatorial Carbohydrate Libraries" Wiley-Interscience: New York 2001 (copy not enclosed)
	C177	Seela <i>et al.</i> , "Oligonucleotides Containing 7-Deazaadenines: The Influence of the 7-Substituent Chain Length and Charge on the Duplex Stability" <i>Helv. Chem. Acta.</i> 82 : 1878-1898 (1999)
	C178	Seela <i>et al.</i> , "Palladium-Catalyzed Cross Coupling of 7-Iodo-2' Deoxytubercidin with Terminal Alkynes" <i>Synthesis</i> : 726-730 (1996)
	C179	Shao <i>et al.</i> , "Random-Priming in Vitro Recombination: An Effective Tool for Directed Evolution" <i>Nucleic Acids Research</i> 26 (2): 681-83 (1998)
	C180	Sheppard <i>et al.</i> , "A DNA Enzyme with N-Glycosylase Activity" <i>Proc. Natl. Acad. Sci. USA</i> 97 : 7802-7807 (2000)
	C181	Shimizu <i>et al.</i> , "Search for Chiral Catalysts Through Ligand Diversity: Substrate-Specific Catalysts and Ligand Screening on Solid Phase" <i>Angew. Chem. Int. Ed.</i> 36 (16): 1704-1707 (1997)
	C182	Shishido <i>et al.</i> , "1,2-Asymmetric Induction in Intramolecular Michael Reaction. A Novel and Enantioselective Route to (+) Geissman Lactone" <i>J. Chem. Soc. Perkins Trans. I</i> : 993-1004 (1987)
	C183	Siegel <i>et al.</i> , "Isolation of Cell Surface-Specific Human Monoclonal Antibodies Using Phage Display and Magnetically-Activated Cell Sorting: Applications in Immunohematology" <i>J. Immunol. Methods</i> 206 : 73-85 (1997)
	C184	Smith, G., "Filamentous Fusion Phage: Novel Expression Vectors That Display Cloned Antigens on the Virion Surface" <i>Science</i> 228 : 1315-1317 (1985)
	C185	Smith, G., "The Progeny of Sexual PCR" <i>Nature</i> 370 : 324-325 (1995)
	C186	Soumillion <i>et al.</i> , "Selection of β -Lactamase on Filamentous Bacteriophage by Catalytic Activity" <i>J. Mol. Biol.</i> 237 : 415-22 (1994)
	C187	Stemmer, "DNA Shuffling by Random Fragmentation and Reassembly: In Vitro Recombination for Molecular Evolution" <i>Proc. Natl. Acad. Sci. USA</i> 91 : 10747-10751 (1994)
	C188	Stemmer, "Rapid Evolution of a Protein <i>In Vitro</i> by DNA Shuffling" <i>Nature</i> 370 : 389-391 (1994)
	C189	Still <i>et al.</i> , "Chemical Consequences of Conformation in Macrocyclic Compounds," <i>Tetrahedron</i> 37 : 3981-3996 (1981)
	C190	Summerer D. <i>et al.</i> , "DNA-Templated Synthesis: More Versatile Than Expected" <i>Angewandte Chemie. Int'l Edit., Verlag Chemie. Weinheim, DE</i> , Vol. 41, No. 1: 89-90 (2002)
	C191	Supplementary European Search Report for Application No. EP 02 75 3671 dated September 21, 2004
	C192	Sutherlin <i>et al.</i> , "Stereoselective Synthesis of Dipyranyl C-Disaccharides" <i>Tetrahedron Lett.</i> 34 (31): 4897-4900 (1993)
	C193	Tamura <i>et al.</i> , "Oligonucleotide-Directed Peptide Synthesis in a Ribosome- and Ribozyme-Free System" <i>Proc. Natl. Acad. Sci. USA</i> 98 : 1393-1397 (2001)
	C194	Tarasow <i>et al.</i> , "Dressed for Success: Realizing the Catalytic Potential of RNA" <i>Biopolymers</i> 48 : 29-37 (1998)
	C195	Tseng-Law <i>et al.</i> , "Identification of a Peptide Directed Against the Anti-CD34 Antibody, 9C5, by Phage Display and Its Use in Hematopoietic Stem Cell Selection" <i>Exp. Hematol</i> 27 : 936-945 (1999)
	C196	Uhlmann <i>et al.</i> , "Synthesis and Properties of PNA/DNA Chimeras" <i>Angew. Chem. Int. Ed. Engl.</i> 35 : 2632-2635 (1996)
	C197	Vacca, "New Advances in the Discovery of Thrombin and Factor Xa Inhibitors" <i>Curr. Opin. Chem. Biol.</i> 4 : 394-400 (2000)
	C198	Van Gelder <i>et al.</i> , <i>PNAS</i> , 85 : 77652-77656 (1988)
	C199	Varner <i>et al.</i> , "Review: $\alpha_v\beta_3$: The Integrin Angiogenesis and Apoptosis" <i>Cell Adhes Commun</i> 3 : 367-374 (1995)
	C200	Vischer <i>et al.</i> , "Template-Directed Synthesis of Acyclic Oligonucleotide Analogs" <i>Journal of Molecular Evolution</i> 28 : 3-6 (1988)
EXAMINER		DATE CONSIDERED

FORM PTO - 1449 INFORMATION DISCLOSURE STATEMENT		ATTORNEY DOCKET NO.: LS5-001 APPLICANT(S): Liu <i>et al.</i> SERIAL NO.: 10/643,752 FILING DATE: August 19, 2003 GROUP: 1637
	C201	Walder <i>et al.</i> , "Complementary Carrier Peptide Synthesis: General Strategy and Implications for Prebiotic Origin of Peptide Synthesis" <i>Proc. Nat. Acad. Sci. USA</i> 76(1): 51-55 (1979)
	C202	Wells <i>et al.</i> , "Rapid Evolution of Peptide and Protein Binding Properties in Vitro" <i>Curr. Opin. Struct. Biol.</i> 2: 597-604 (1992)
	C203	Wermuth <i>et al.</i> , "Stereoisomerism and Biological Activity of the Selective and Superactive $\alpha_v\beta_3$ Integrin Inhibitor Cyclo (-RGDFV -) and Its Retro-Inverso Peptide" <i>J. Am. Chem. Soc.</i> 119: 1328-1335 (1997)
	C204	Wiegand <i>et al.</i> , "Selection of RNA Amide Synthases" <i>Chemistry and Biology</i> 4: 675-683 (1997)
	C205	Wilson <i>et al.</i> , "In Vitro Selection of Functional Nucleic Acids" <i>Annu. Rev. Biochem.</i> 68: 611-647 (1999)
	C206	Winter <i>et al.</i> , "Making Antibodies by Phage Display Technology" <i>Annu. Rev. Immunol.</i> 12: 433-455 (1994)
	C207	Wong <i>et al.</i> , "Enzymes in Synthetic Organic Chemistry" 388 pages <i>Pergamon: Tetrahedron Organic Chemistry Series</i> 12: 1994 (Index only enclosed)
	C208	Woodward <i>et al.</i> , "Asymmetric Total Synthesis of Erythromycin. 1. Synthesis of an Erythronolide A Seco Acid Derivative via Asymmetric Induction" <i>J. Am. Chem. Soc.</i> 103: 3210-3213 (1981)
	C209	Xu <i>et al.</i> , "Nonenzymatic Autoligation in Direct Three-Color Detection of RNA and DNA Point Mutations" <i>Nature Biotechnology</i> 19: 148-152 (2001)
	C210	Xu <i>et al.</i> , "Rapid and Selective Selenium-Mediated Autoligation of DNA Strands" <i>J. Am. Chem. Soc.</i> 122: 9040-9041 (2000)
	C211	Zarling <i>et al.</i> , "Mapping of Lymphocyte Surface Polypeptide Antigens by Chemical Cross-Linking with Bsocoec" <i>J. Immunology</i> 124: 913-920 (1980)
	C212	Zhan <i>et al.</i> , "Chemical Amplification through Template-Directed Synthesis" <i>J. Am. Chem. Soc.</i> Vol. 119, No. 50: 12420-12421 (1997) see entire document.
	C213	Zhang <i>et al.</i> , "Lactone and Lactam Library Synthesis by Silver Ion-Assisted Orthogonal Cyclization of Unprotected Peptides" <i>J. Am. Chem. Soc.</i> 121: 3311-3320 (1999)
	C214	Zhao <i>et al.</i> , "A Methodological Comparison: The Advantage of Phosphorimidates in Expanding the Sugar Nucleotide Repertoire" <i>J. Org. Chem.</i> 63: 7568-7572 (1998)
	C215	Zhao <i>et al.</i> , "Molecular Evolution by Staggered Extension Process (StEP) in Vitro Recombination" <i>Nature Biotechnology</i> 16(3): 258-61 (1998)
	C216	Zhao <i>et al.</i> , "Optimization of DNA Shuffling for High Fidelity Recombination" <i>Nucleic Acids Research</i> 25(6): 1307-1308 (1997)
	C217	Schmidt <i>et al.</i> , "Information Transfer from Peptide Nucleic Acids to RNA by Template-Directed Syntheses" <i>Nucleic Acids Research</i> 25(23): 4797-4802 (1997)
EXAMINER		DATE CONSIDERED

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